

**Abstract of the Disclosure**

5 In illustrative embodiments, equivalent  
network processing of packets is performed  
at a single node instead of at a large number  
of special purpose nodes. A single-pass  
pipelined packet scan at the single node  
permits required actions to be taken in an  
10 integrated manner to avoid repetitive  
processing. Processing is conveniently  
accomplished in separate stateless and  
stateful segments, with state-related  
information derived during the stateless  
15 packet scan segment tagged to processed  
packets as required for subsequent stateful  
processing.